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What is claimed is:

1. A constant current circuit including a plurality of resistors formed on a semiconductor substrate, comprising:
 3. a first current source for producing a first current of constant magnitude regardless of resistance variations which can occur uniformly in said resistors; and
 6. a second current source for producing a second current of magnitude which is inversely variable with said resistance variations,
 8. said first and second current sources being connected to each other for producing an output current which is equal to a difference between said first and second currents.
1. 2. The constant current circuit of claim 1, wherein said second current is variable depending on a base-emitter voltage of a transistor.
1. 3. The constant current circuit of claim 1, wherein said second current is variable depending on a power-line voltage.
1. 4. The constant current circuit of claim 1, wherein said second current source is a band-gap type constant current source.
1. 5. A constant current circuit including a plurality of resistors formed on a semiconductor substrate, comprising:
 3. a first group of parallel transistors having emitters connected via respective resistors to a voltage source and having collectors connected together to an output terminal;

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6 a second group of parallel transistors having emitters connected via
7 respective resistors to said voltage source and having collectors connected to
8 each other;

9 a constant current source connected between the collectors of said
10 second group of transistors and ground to produce a constant current, said
11 first and second groups of transistors having bases connected together to
12 form a current mirror, whereby a current equal to said constant current is
13 drawn by said first group of transistors to said output terminal; and

14 transistor-resistor circuitry for drawing a current inversely variable
15 with uniform resistance variations of said semiconductor substrate from said
16 output terminal to ground.

1 6. The constant current circuit of claim 5, wherein said transistor-
2 resistor circuitry comprises:

3 at least one third transistor having an emitter connected via a resistor
4 to said voltage source and a collector connected to a circuit node, whereby a
5 current whose magnitude is equal to $1/M$ of said constant current is drawn
6 by said third transistor to said circuit node, where M is the number of
7 transistors provided in each of said first and second groups of transistors;

8 a fourth transistor having a collector connected to said output terminal
9 and an emitter connected to ground via a resistor, said fourth transistor
10 having a base electrode connected to said circuit node; and

11 a fifth transistor having a collector connected to said circuit node and
12 an emitter connected to ground via a resistor, said fifth transistor having a
13 base electrode connected to the emitter of said fourth transistor.

1 7. The constant current circuit of claim 5, wherein said transistor-

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2 resistor circuitry comprises:

3 a pair of resistors connected in series between said voltage source and

4 ground to form a circuit node therebetween; and

5 a third transistor having a collector connected to said output terminal

6 and an emitter connected to ground via a resistor, said third transistor having

7 a base electrode connected to said circuit node.

1 8. The constant current circuit of claim 5, wherein said transistor-
2 resistor circuitry comprises:

3 third and fourth transistors having emitters connected via respective
4 resistors to said voltage source and having bases connected together to the
5 bases of said first and second groups of transistors to produce from each of
6 the third and fourth transistors a current whose magnitude is equal to $1/M$ of
7 said constant current, where M is the number of transistors provided in each
8 of said first and second groups of transistors;

9 a group of fifth transistors having collectors connected together to the
10 collector of said third transistor, having emitters connected together to
11 ground through a series-connected resistors to ground and having bases
12 connected to a first circuit node to which collector of said fourth transistor is
13 connected;

14 a sixth transistor having a collector and a base electrode connected
15 together to said first circuit node and having an emitter connected to a second
16 circuit node formed between said series-connected resistors; and

17 a seventh transistor having a collector connected to said output
18 terminal and an emitter connected to ground via a resistor and having a base
19 electrode connected to said first circuit node.

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1 9. An active filter circuit having a plurality of resistors formed on
2 a semiconductor substrate, comprising:
3 a first current source for producing a first current of constant
4 magnitude regardless of resistance variations which can occur uniformly in
5 said resistors;
6 a second current source for producing a second current of magnitude
7 which is inversely variable with said resistance variations, said first and
8 second current sources being connected to each other for producing an
9 output current which is equal to a difference between said first and second
10 currents; and
11 an active filter driven by said output current for filtering an input
12 signal.

1 10. The active filter circuit of claim 9, wherein said active filter is a
2 low-pass filter.

1 11. The active filter circuit of claim 9, wherein said active filter
2 comprises:
3 a pair of switching circuits driven by said output current, said
4 switching circuits alternately assuming a conducting state according to
5 polarity of an input signal applied thereto; and
6 resistor-capacitor circuitry connected across said switching circuits to
7 produce an output signal.

1 12. The active filter circuit of claim 9, wherein said second current
2 is variable depending on an base-emitter voltage of a transistor.

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1 13. The active filter circuit of claim 9, wherein said second current
2 is variable depending on a power-line voltage.

1 14. The active filter circuit of claim 9, wherein said second current
2 source is a band-gap type constant current source.

1 15. An active filter circuit having a plurality of resistors formed on
2 a semiconductor substrate, comprising:
3 a first group of parallel transistors having emitters connected via
4 respective resistors to a voltage source and having collectors connected
5 together to an output terminal;

6 a second group of parallel transistors having emitters connected via
7 respective resistors to said voltage source and having collectors connected to
8 each other;

9 a constant current source connected between the collectors of said
10 second group of transistors and ground to produce a constant current, said
11 first and second groups of transistors having bases connected together to
12 form a current mirror, whereby a current equal to said constant current is
13 drawn by said first group of transistors to said output terminal; and

14 transistor-resistor circuitry for drawing a current inversely variable
15 with uniform resistance variations of said semiconductor substrate from said
16 output terminal to ground;

17 a pair of switching circuits driven by said output current, said
18 switching circuits alternately assuming a conducting state according to
19 polarity of an input signal applied thereto; and

20 resistor-capacitor circuitry connected across said switching circuits to
21 produce an output signal.

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1 16. The active filter circuit of claim 15, wherein one of said
2 switching circuits comprises a first transistor and a second transistor
3 connected in series between said voltage source and ground, and the other
4 switching circuit comprises a third transistor and a fourth transistor
5 connected in series between said voltage source and ground,
6 said first and third transistors having bases connected together to
7 receive said output current, and said second and fourth transistor connected
8 to a pair of input terminals to which said input signal is applied,
9 wherein said resistor-capacitor circuitry comprises:
10 a resistor connected between collectors of said first and third
11 transistors; and
12 a capacitor connected between collectors of said second and fourth
13 transistors for producing said output signal.

1 17. The active filter circuit of claim 15, wherein said transistor-
2 resistor circuitry comprises:
3 at least one third transistor having an emitter connected via a resistor
4 to said voltage source and a collector connected to a circuit node, whereby a
5 current whose magnitude is equal to $1/M$ of said constant current is drawn
6 by said third transistor to said circuit node, where M is the number of
7 transistors provided in each of said first and second groups of transistors;
8 a fourth transistor having a collector connected to said output terminal
9 and an emitter connected to ground via a resistor, said fourth transistor
10 having a base electrode connected to said circuit node; and
11 a fifth transistor having a collector connected to said circuit node and
12 an emitter connected to ground via a resistor, said fifth transistor having a
13 base electrode connected to the emitter of said fourth transistor.

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1 18. The active filter circuit of claim 15, wherein said transistor-
2 resistor circuitry comprises:

3 a pair of resistors connected in series between said voltage source and
4 ground to form a circuit node therebetween; and
5 a third transistor having a collector connected to said output terminal
6 and an emitter connected to ground via a resistor, said third transistor having
7 a base electrode connected to said circuit node.

1 19. The active filter circuit of claim 15, wherein said transistor-
2 resistor circuitry comprises:

3 third and fourth transistors having emitters connected via respective
4 resistors to said voltage source and having bases connected together to the
5 bases of said first and second groups of transistors to produce from each of
6 the third and fourth transistors a current whose magnitude is equal to $1/M$ of
7 said constant current, where M is the number of transistors provided in each
8 of said first and second groups of transistors;

9 a group of fifth transistors having collectors connected together to the
10 collector of said third transistor, having emitters connected together to
11 ground through a series-connected resistors to ground and having bases
12 connected to a first circuit node to which collector of said fourth transistor is
13 connected;

14 a sixth transistor having a collector and a base electrode connected
15 together to said first circuit node and having an emitter connected to a second
16 circuit node formed between said series-connected resistors; and

17 a seventh transistor having a collector connected to said output
18 terminal and an emitter connected to ground via a resistor and having a base
19 electrode connected to said first circuit node.